

The invention claimed is:

1. An electrochemical cell comprising a positive electrode having an active material and an electrically conductive carbon material including expanded graphite particles having a kerosene absorption value in the range of 2.2 to 3.5 ml/g.
2. The electrochemical cell as defined in claim 1, wherein said expanded graphite particles have an average particle size in the range of 17 to 32 micrometers and a d_{90} value in the range of 40 to 85 micrometers. *fig. 2*
3. The electrochemical cell as defined in claim 2, wherein said expanded graphite particles have a d_{10} value in the range of 3 to 9 micrometers.
4. The electrochemical cell as defined in claim 2, wherein said expanded graphite particles have a kerosene absorption in the range of 2.7 to 3.1 ml/g.
5. The electrochemical cell as defined in claim 2, wherein said expanded graphite particles have a surface area-to-mass ratio of at least 18 m²/g.
6. The electrochemical cell as defined in claim 5, wherein said expanded graphite particles have a tap density in the range of 0.09 to 0.14 g/cc.

7. The electrochemical cell as defined in claim 6, wherein said expanded graphite particles have a Scott density of no greater than 0.07 g/ml.

8. The electrochemical cell defined in claim 2, wherein said active material of said positive electrode comprises primarily manganese dioxide.

9. The electrochemical cell defined in claim 1, wherein said expanded graphite particles are derived from natural graphite.

10. The electrochemical cell defined in claim 1, wherein said expanded graphite particles comprise 3.2 to 6.25 weight percent of the cathode.

11. An electrochemical cell comprising a positive electrode having an active material and an electroconductive carbon material including expanded graphite particles having a purity level of greater than 99.9 percent, as determined by weight loss on ignition.

12. The electrochemical cell as defined in claim 11, wherein said graphite particles have a purity level greater than 99.95%

13. The electrochemical cell as defined in claim 11, wherein said expanded graphite particles have impurities including any of antimony, arsenic, molybdenum, vanadium, chromium, iron,

copper, and tin, and wherein an aggregate total of said impurities amounts to no greater than 200 parts per million.

14. The electrochemical cell as defined in claim 11, wherein said expanded graphite particles have a kerosene absorption value of 2.2 to 3.5 ml/g.

15. The electrochemical cell as defined in claim 14, wherein said expanded graphite particles have an average particle size in the range of 17 to 32 micrometers and a d_{90} value in the range of 40 to 85 micrometers.

16. An electrochemical cell comprising a positive electrode comprising an active material and an electroconductive carbon material, the carbon material including expanded graphite particles having an average particle size in the range of 17 to 32 micrometers, a d_{90} value in the range of 40 to 85 micrometers, a d_{10} value in the range of 3 to 9 micrometers, a kerosene absorption value of 2.2 to 3.5 ml/g, a tap density in the range of 0.09 to 0.14 g/cc and a Scott density of no greater than 0.07 g/ml.

17. The electrochemical cell as defined in claim 16, wherein said expanded graphite particles have a purity level of greater than 99.9%, as determined by weight loss on ignition, and contain any of antimony, arsenic, molybdenum, vanadium, chromium, iron, copper, and tin as impurities, and wherein the aggregate total of said impurities is no greater than 200 parts per million.

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